

COMPLETE SET OF PENDING CLAIMS

1. (Currently Amended) A navigation device comprising:
an electronic compass to detect an orientation and provide a corresponding heading signal;
one or more motion sensing devices to detect motion along different axis and provide corresponding motion signals; and
a processing unit communicatively coupled to the electronic compass and the one or more motion sensing devices to ~~received~~ receive the heading signal and the one or more motion signals, determine a position and orientation, and automatically provide different navigation information depending on the orientation of the navigation device.
2. (Original) The navigation device of claim 1 wherein the processing unit is further configured to provide different navigation information depending on whether the navigation device is affixed to a user or not.
3. (Currently Amended) The navigation device of claim 2 further comprising:
a visible indicator to provide navigation information to a user; ~~and~~
~~a holster to affix the navigation device to a user.~~
4. (Currently Amended) The navigation device of claim 1 wherein the navigation device automatically switches between different modes of operation depending on the orientation of the navigation device,
and ~~provide~~ provides either heading or position information, depending on the mode of operation.
5. (Original) The navigation device of claim 1 wherein
if the navigation device is affixed to a user and the device is in a primary orientation, navigation calculations are made according to bipedal ambulation to provide a position,

if the navigation device is affixed to a user and the device is in a secondary orientation, then navigation calculations are made according to crawling ambulation to provide a position, and

if the navigation device is hand-held, only azimuth data is provided to the user.

6. (Original) The navigation device of claim 1 further comprising:
a communication port to transmit navigation information.

7. (Original) A method of navigation comprising:
determining whether a navigation device is affixed to a user;
obtaining an azimuth heading;
calculating a dead reckoning position if the navigation device is affixed to the user;
providing azimuth heading and dead reckoning position if the navigation device is affixed to the user; and
providing azimuth heading otherwise.

8. (Original) The method of claim 7 further comprising:
determining an orientation of the navigation device relative to a horizontal plane;
calculating the dead reckoning position according to bipedal ambulation when the navigation device is affixed to the user and is in a first orientation; and
calculation the dead reckoning position according to crawling ambulation when the navigation device is affixed to the user and is in a second orientation.

9. (Original) A method comprising:
determining the orientation of a navigation device;
automatically selecting a first motion measurement algorithm if the navigation device is in a first orientation;
automatically selecting a second motion measurement algorithm if the navigation device is in a second orientation; and
providing a position according to the pedometry algorithm selected.

10. (Original) The method of claim 9 wherein the orientation of the navigation device is determined relative to a horizontal plane.
11. (Original) The method of claim 9 further comprising:
 - determining if the navigation device is affixed to a user;
 - automatically selecting the first motion measurement algorithm if the navigation device is in the first orientation and affixed to the user;
 - automatically selecting the second motion measurement algorithm if the navigation device is in the second orientation and affixed to the user; and
 - suspending all motion measurement calculations if the navigation device is not affixed to the user.
12. (Original) A machine-readable medium having one or more instructions for dead reckoning navigation, which when executed by a processor, causes the processor to perform operations comprising
 - determining whether a navigation device is affixed to a user;
 - obtaining an azimuth heading;
 - calculating a dead reckoning position if the navigation device is affixed to the user;
 - outputting the azimuth heading and dead reckoning position if the navigation device is affixed to the user; and
 - outputting the azimuth heading otherwise.
13. (Currently Amended) The machine-readable medium of claim 12 to further comprising:
 - determining an orientation of the navigation device relative to a horizontal plane,
 - calculating the dead reckoning position according to bipedal ambulation when the navigation device is affixed to the user and is in a first orientation, and
 - calculation the dead reckoning position according to crawling ambulation when the navigation device is affixed to the user and is in a second orientation.
14. (New) The method of claim 9 further comprising:
 - detecting if a step has been taken.

15. (New) The method of claim 9 further comprising:
providing heading information.
16. (New) The navigation device of claim 1 wherein determining the orientation includes
determining the orientation of a gravity vector.
- 17 (New) The navigation device of claim 1 further comprising:
a detector to detect when the navigation device is inserted in a holster.